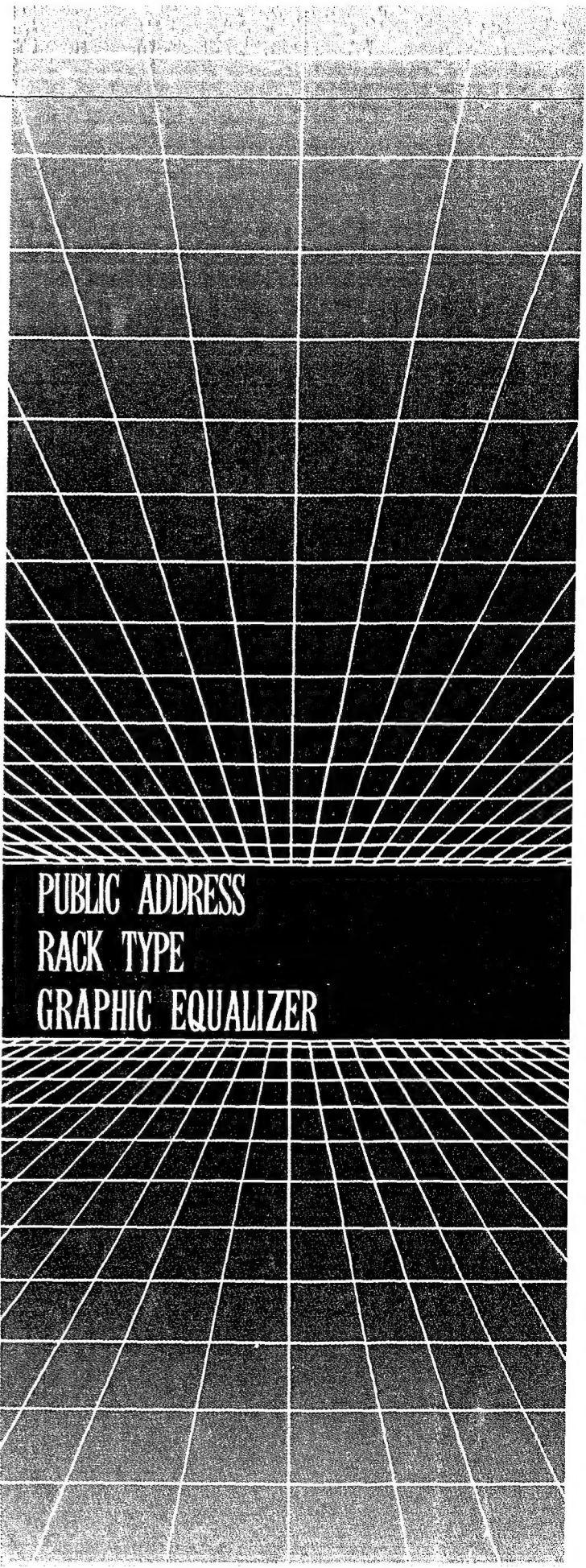


SERVICE MANUAL

MODEL: EQ-825

inkel®

9007920890



**PUBLIC ADDRESS
RACK TYPE
GRAPHIC EQUALIZER**

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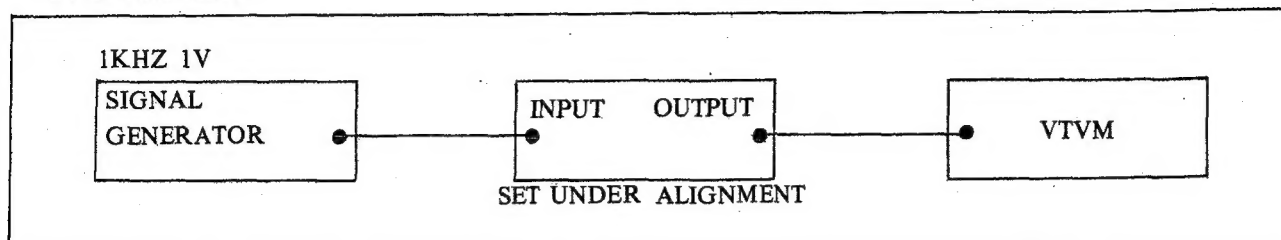
Electrical Adjustment Procedure

1. OUTPUT LEVEL ADJUSTMENT

A. SETTING

Function Switch:EQ, DEFEAT, NOTCH OFF

B. CONNECTION



C. ADJUSTMENT

Apply a 1KHZ input signal of 1V.

Adjust the SVR 601 so that output voltage is 1V.

Specifications

ELECTRICAL

Frequency Response	20Hz to 20KHz \pm 1dB
Input Level	0dB Balanced
Impedance	8Kohm
Connectors	XLR Connector & PL-55 Jack
Output Level	0dB Balanced
Impedance	200 ohm
Connectors	XLR Connector & PL-55 Jack
Equalizer Level	\pm 12dB
Equalizer Frequency	20, 15, 31.5, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1K, 1.25K, 1.6K, 2K, 2.5K, 3.15K, 4K, 5K, 6.3K, 8K, 10K, 12.5K, 16K, 20K
Notch Frequency Range	High ... 850 to 22,000Hz Low ... 16 to 1,500Hz
Notch Depth Control	0 to -20dB
Signal to Noise Ratio	More than 89dB
T.H.D.	Below 0.01%

GENERAL

Power Requirement	AC100V/120V/220V/240V, 50/60Hz
Power Consumption	6W
Dimensions	483(W) \times 89(H) \times 240(D)mm
Weight (Net)	5Kg

Parts List

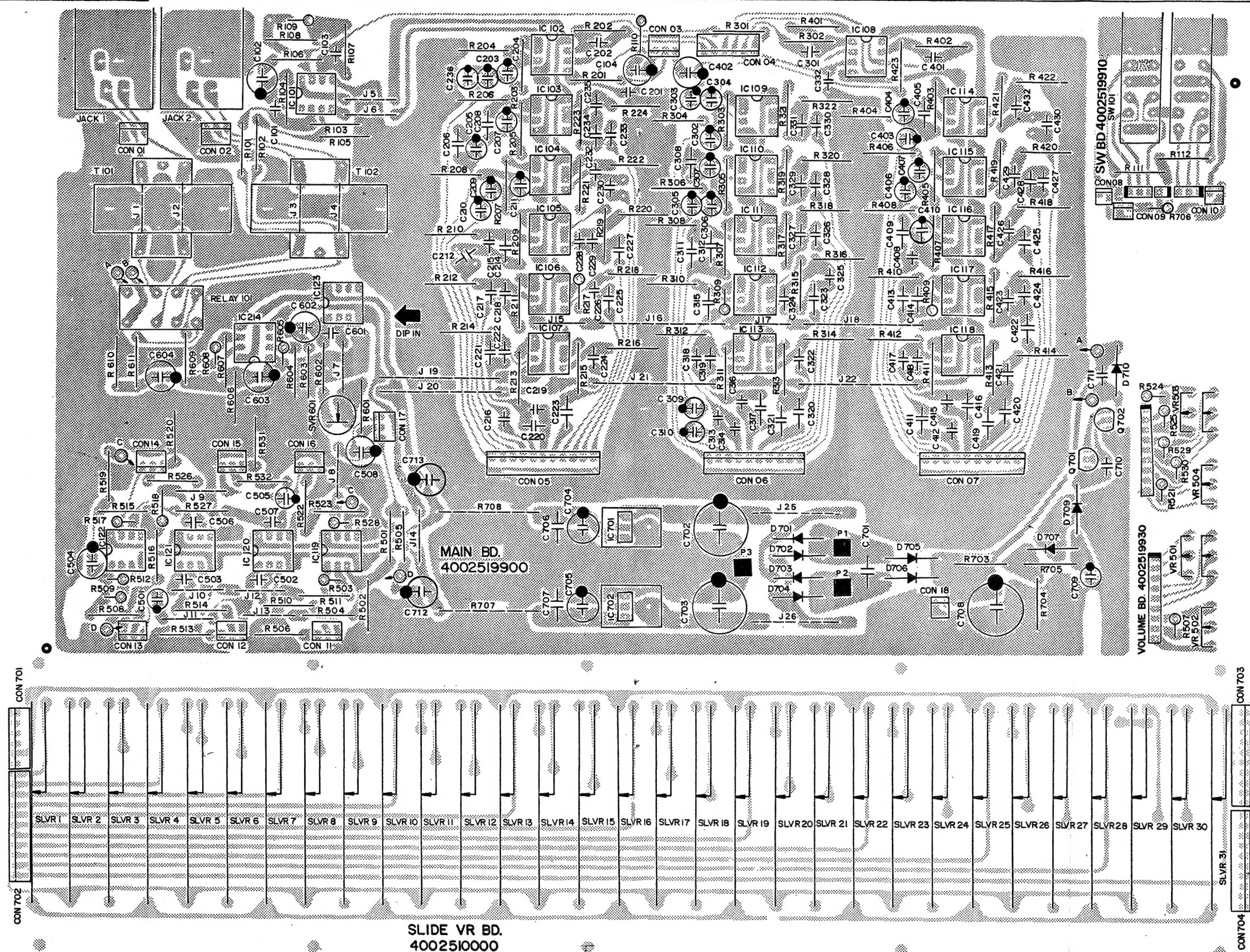
Ref. No.	Parts No.	Description	Q'ty
4002519901 MAIN B'D			
IC101~IC124	2168220100	IC 4558P	24
IC701	2168630996	IC 7818	1
IC702	2168630997	IC 7918	1
D701~D706	2058106100	DIODE RECTIFIER IN4002 KEC	7
D710			
D707, D709	2058010100	DIODE IN60	2
Q701, 702	2082606107	TR NPN 2SC 1815	2
RELAY 101	5528001040	RELAY RY-24Z TAKAMISAWA	1
JACK 1, 2	4438001110	PHONE JACK (STEREO)	2
SVR 601	3248322320	RES SEMI CS 22KB 10/5	1
R701, R702	3039100372	RES M.O 10 1W	2
R423	3009100273	RES CF 10 $\frac{1}{4}$ W JN	1
R100	3009100275	RES CF 10 $\frac{1}{4}$ W JR	1
R609, R611	3009101273	RES CF 100 $\frac{1}{4}$ W JN	2
R607, R508	3009221273	RES CF 220 $\frac{1}{4}$ W JN	3
R522			
R608	3009221275	RES CF 220 $\frac{1}{4}$ W JR	1
R317, R421	3009331273	RES CF 330 $\frac{1}{4}$ W JN	2
R205, R207	3009391273	RES CF 390 $\frac{1}{4}$ W JN	5
R319, R403			
R417			
R107, R221	3009471273	RES CF 470 $\frac{1}{4}$ W JN	6
R405, R415			
R419, R411			
R605	3009471275	RES CF 470 $\frac{1}{4}$ W JR	1
R315, R502	3009561273	RES CF 560 $\frac{1}{4}$ W JN	3
R516			
R200, R409	3009561275	RES CF 560 $\frac{1}{4}$ W JR	2
R209, R213	3009681273	RES CF 680 $\frac{1}{4}$ W JN	9
R219, R223			
R303, R311			
R321, R407			
R413			
R217	3009681275	RES CF 680 $\frac{1}{4}$ W JR	1
R203, R211	3009821273	RES CF 820 $\frac{1}{4}$ W JN	6
R215, R305			
R307, R313			
R309	3009821275	RES CF 820 $\frac{1}{4}$ W JR	1
R704	3009102273	RES CF 1K $\frac{1}{4}$ W JN	1
R105, R602,	3009122273	RES CF 1.2K $\frac{1}{4}$ W JN	6
R506, R513			
R520, R531			
R103	3009152273	RES CF 1.5K $\frac{1}{4}$ W JN	1
R101, R102	3009392273	RES CF 3.9K $\frac{1}{4}$ W JN	2
R501, R504	3009472273	RES CF 4.7K $\frac{1}{4}$ W JN	13
R505, R511			
R514, R515			
R519, R523			
R526, R527			
R532, R510			
R703			
R503, R509	3009472275	RES CF 4.7K $\frac{1}{4}$ W JR	6

Ref. No.	Parts No.	Description	Q'ty
R512, R517			
R518, R528			
R104	3009562273	RES CF 5.6K $\frac{1}{4}$ W JN	1
R601	3009682273	RES CF 6.8K $\frac{1}{4}$ W JN	1
R201, R202	3009103273	RES CF 10K $\frac{1}{4}$ W JN	7
R301, R302			
R401, R402			
R106			
R109	3009103275	RES CF 10K $\frac{1}{4}$ W JR	1
R604	3009123273	RES CF 12K $\frac{1}{4}$ W JN	1
R408	3009823273	RES CF 82K $\frac{1}{4}$ W JN	1
R108, R204	3009104273	RES CF 100K $\frac{1}{4}$ W JN	16
R210, R212			
R216, R220			
R224, R320			
R410, R412			
R414, R416			
R420, R422			
R603, R705			
R206, R208	3009124273	RES CF 120K $\frac{1}{4}$ W JN	13
R214, R218			
R222, R308			
R312, R314			
R316, R318			
R322, R406			
R418			
R304, R306	3009154273	RES CF 150K $\frac{1}{4}$ W JN	4
R310, R404			
R606, R610	3009474273	RES CF 470K $\frac{1}{4}$ W JN	2
C233, C235	3609102120	CAP M 0.001 μ F 100WV	5
C427, C428			
C430			
C330, C420	3609122120	CAP M 0.0012 μ F 100W V	2
C230, C331	3609152120	CAP M 0.0015 μ F 100W V	4
C506, C507			
C228, C229	3609222120	CAP M 0.0022 μ F 100W V	5
C219, C320			
C328			
C325	3609252120	CAP M 0.0025 μ F 100W V	1
C232, C432	3609272120	CAP M 0.0027 μ F 100W V	2
C227, C415	3609332120	CAP M 0.0033 μ F 100W V	3
C425			
C326, C429	3609392120	CAP M 0.0039 μ F 100W V	2
C316, C412	3609472120	CAP M 0.0047 μ F 100WV	2
C225, C234	3609562120	CAP M 0.0056 μ F 100W V	2
C329, C422	3609682120	CAP M 0.0068 μ F 100W V	2
C226, C323	3609822120	CAP M 0.0082 μ F 100W V	3
C424			
C423, C426	3609103120	CAP M 0.01 μ F 100W V	3
C711			
C223, C419	3609123120	CAP M 0.012 μ F 100W V	2
C224, C321	3609153120	CAP M 0.015 μ F 100W V	4
C324, C327			
C221, C222	3609183120	CAP M 0.018 μ F 100W V	3

Ref No.	Parts No.	Description	Q'ty
C322, C416	3609223120	CAP M 0.022 μ F 100W V	4
C502, C503			
C314, C317	3609273120	CAP M 0.027 μ F 100W V	4
C319, C421			
C217, C218	3609333120	CAP M 0.033 μ F 100W V	5
C318, C418			
C313			
C216, C411	3609473120	CAP M 0.047 μ F 100W V	3
C417			
C206, C409	3609563120	CAP M 0.056 μ F 100WV	3
C413			
C215, C308	3609683120	CAP M 0.068 μ F 100W V	3
C408			
C212, C311	3609823210	CAP M 0.082 μ F 100W V	5
C315, C405			
C414			
C208, C214	3609104120	CAP M 0.1 μ F 100W V	6
C312, C701			
C706, C707			
C101	3509270130	CAP C 27PF 50W V	1
C103	3509470130	CAP C 47PF 50W V	1
C202, C301	3509151130	CAP C 150PF 50W V	4
C332, C401			
C201, C710	3509221130	CAP C 220PF 50W V	2
C601	3509271130	CAP C 270PF 50W V	1
C702, C703	3409247161	CAP E 470 μ F 35V	2
C102, C104	3409210141	CAP E 100 μ F 25V	12
C402, C504			
C508, C602			
C603, C604			
C704, C705			
C712, C713			
C708	3409247061	CAP E 47 μ F 35V	1
C709	3409222041	CAP E 22 μ F 25V	1
C501, C505	3409210061	CAP E 10 μ F 35V	2
C304	3409233971	CAP E 3.3 μ F 50V	1
C204, C207	3409210971	CAP E 1 μ F 50V	5
C303, C306			
C404			
C203, C209	3409247871	CAP E 0.47 μ F 50V	5
C211, C302			
C407			
C305, C309	3409233871	CAP E 0.33 μ F 50V	3
C403			
C205, C210	3409222871	CAP E 0.22 μ F 50V	7
C236, C307			
C310, C406			
C410			
CON18	4428501010	CONNECTOR WAFER LW2P	1
CON01~03	4428598320	CONNECTOR WAFER LW 3P	10
CON11~17			
CON04	4428598350	CONNECTOR WAFER LW 6P	1
CON06, 07	4428598390	CONNECTOR WAFER LW 10P	2
CON05	4428598311	CONNECTOR WAFER LW 11P	1

Ref No.	Parts No.	Description	Q'ty
P1~P3	4355997230	CONNECTOR ASS'Y(3P)	2
	4225000314	PIN WRAPPING	3
	7505200710	HEAT SINK(REGULATOR TR.)	2
	8019230081	SCREW #2 PTC 3 \times 8Y	4
	8319130011	SPRING WASHER(ϕ 3)	2
	4855000111	CERAMIC PIPE	4
4002519910 SUB SWITCH B'D			
VR501	3208097410	VR ϕ 16 100KB \times 2 (15mm)	1
VR503	3208097310	VR. ϕ 16 200KB \times 2(15mm)	1
VR502, 504	3208097710	VR. ϕ 16 10KB(15mm)	2
R524, R525	3009273275	RES CF 27K $\frac{1}{4}$ W JR	4
R529, R530			
R507, R521	3009222275	RES CF 2.2K $\frac{1}{4}$ W JR	2
	4355985730	CONNECTOR ASS'Y 3P(450mm)	6
4002519930 SUB VOLUME B'D			
SW101	4628995810	SW. PUSH P12.5 4 \times 4	1
D708	2308060104	LED KLR208E 2 \times 5 RD	1
D711, D713	2308220118	LED SLR-34 UR3	2
R111, R112	3009103273	RES CF 10K $\frac{1}{4}$ W JN	2
R706	3009202275	RES CF 2K $\frac{1}{4}$ W JR	1
CON8~10	4428501010	CONNECTOR WAFER LW 2P	3
	4353997120	CONNECTOR ASS'Y 2P(200mm)	1
	4353997130	CONNECTOR ASS'Y 2P(80mm)	2
	4355974110	CONNECTOR ASS'Y 4P(400mm)	1
	4355974010	CONNECTOR ASS'Y 4P(450mm)	1
4002510000 SLIDE VOLUME B'D			
SLVR1~31	3238097910	SL VR 50KW L45	31
CON701	4428598350	CONNECTOR WAFER LW 6P	1
CON703,	4428598390	CONNECTOR WAFER LW 10P	2
CON704			1
CON702	4428598311	CONNECTOR WAFER LW 11P	1
	4355977910	CONNECTOR ASS'Y 6P	1
	4355977810	CONNECTOR ASS'Y 10P(A)	1
	4355977710	CONNECTOR ASS'Y 10P(B)	1
	4355977610	CONNECTOR ASS'Y 11P	1
PRIMARY FUSE	5508211230	NB 31.8mm 0.25A/250V KS FOR KS	1
PRIMARY FUSE	5508211230	NB 31.8mm 0.25A/250V KS FORUL CSA	1
PRIMARY FUSE	5508210930	NB 31.8mm 0.15A/250V KS FOR G-EUROPE	1
PRIMARY FUSE	5508210930	NB 31.8mm 0.15A/250V KS FOR BSI	1

Top View of P.C. Boards

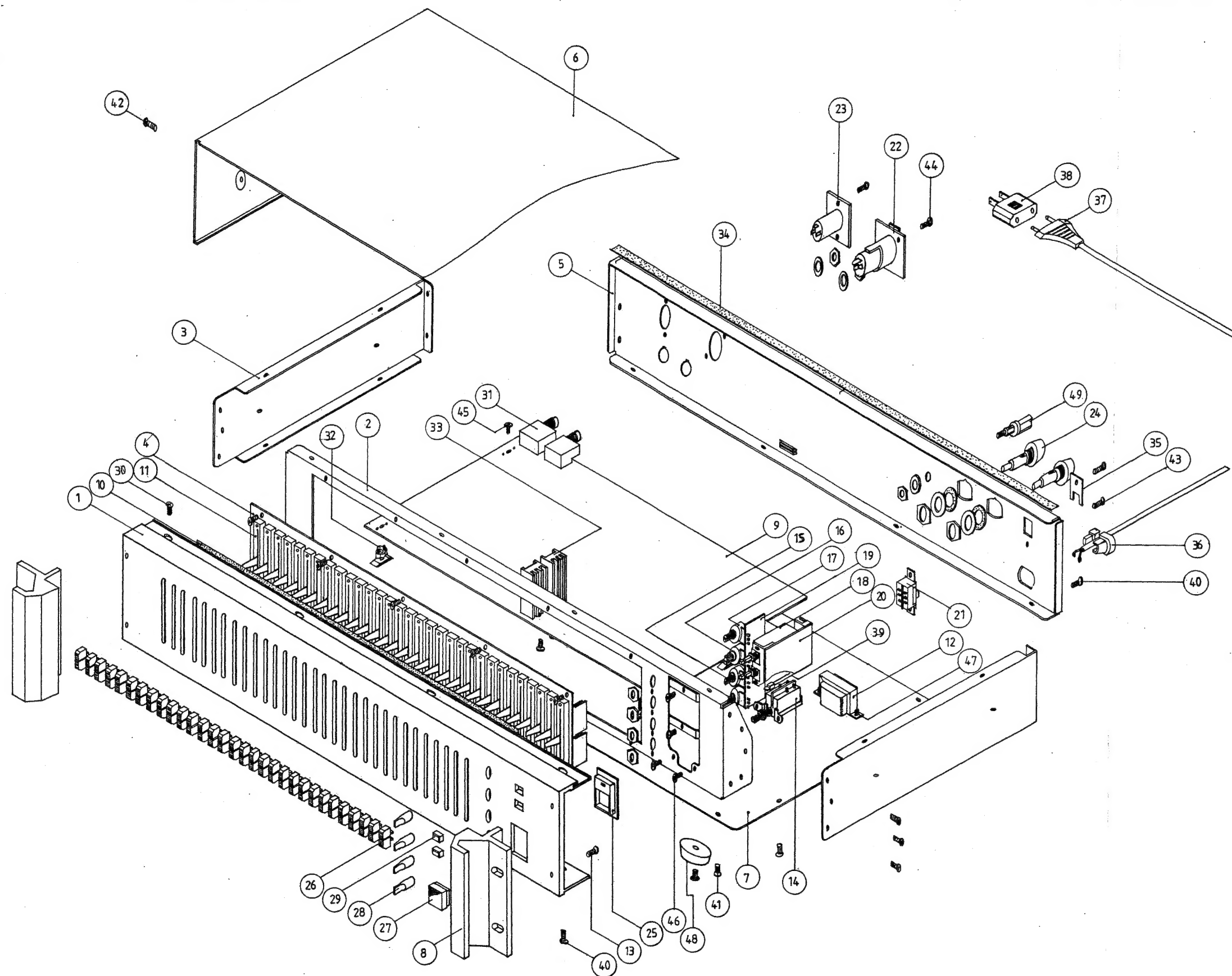


Parts List According to Exploded View

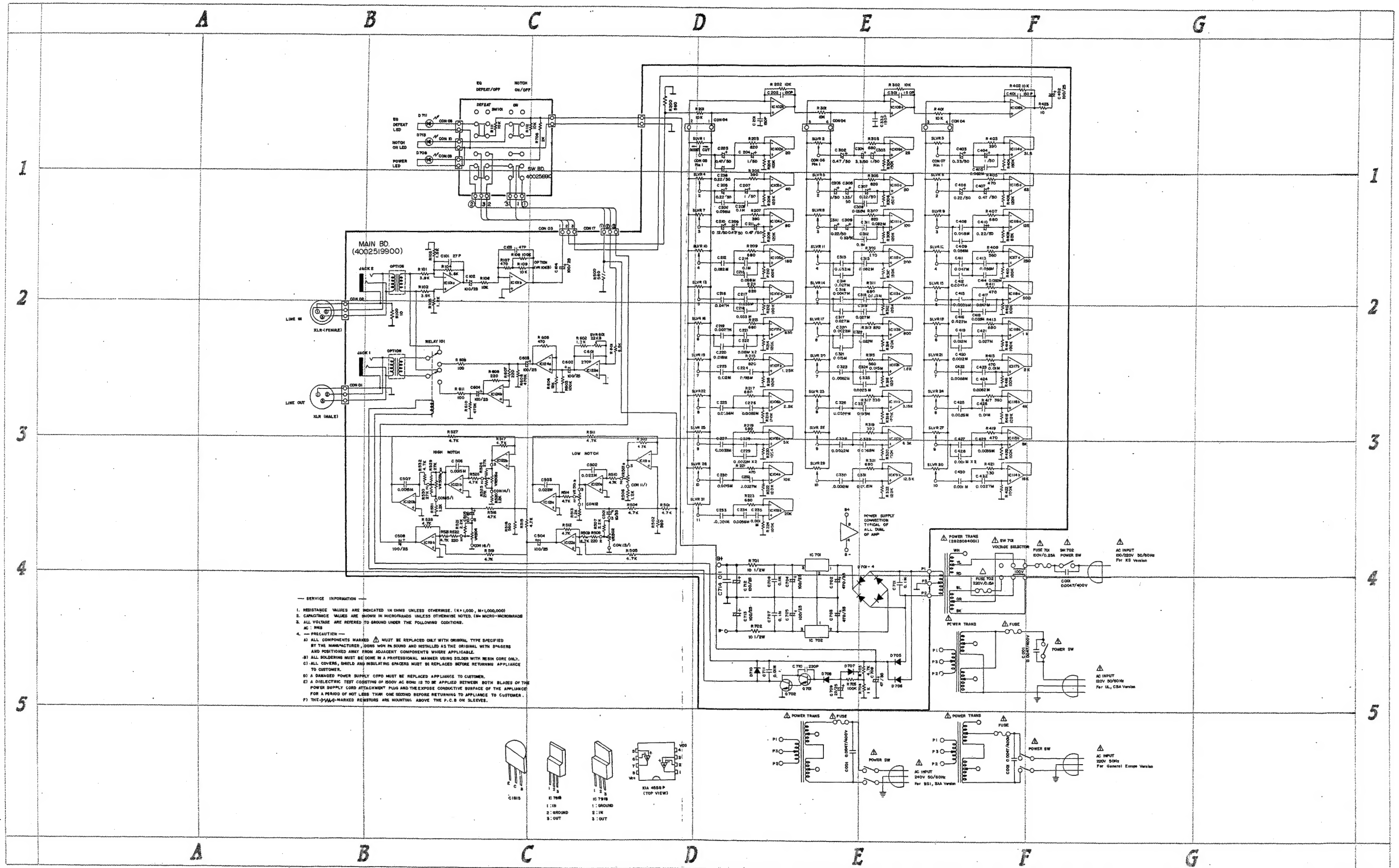
No.	Description	Parts No.	Q'ty	Remarks
1	FRONT PANEL	8602992110	1	
2	FRONT CHASSIS	6122492110	1	
3	FRAME SIDE	6123699320	2	
4	SLIDE VR P.C.B	4002510000	1	
5	BACK CHASSIS	6102993211	1	FOR KS
5-1	BACK CHASSIS	046102993223	1	FOR UL,CSA
5-2	BACK CHASSIS	04510299322	1	FOR G EUROPE
5-3	BACK CHASSIS	046102993231	1	FOR BSI
6	COVER TOP	6121099910	1	
7	COVER BOTTOM	6122492010	1	
8	RACK MOUNT BASE	8603999210	2	
9	MAIN P.C.B	4002519900	1	
10	STRIP FELT	3733999310	1	
11	SLIDE VR 50KW L45	6238097910	31	
12	POWER TRANS	2828094000	1	
13	SCREW BM4×10Y	8009140101	4	
14	POWER SWITCH	4628005410	1	FOR K.S.BSI G.EUR
14-1	POWER SWITCH	4628004710	1	FOR UL,CSA
15	VR φ16 100KB×2	3268097410	1	
16	VR φ16 10KB	3268097710	2	
17	VR φ16 200KB×2	3268097310	1	
18	PUSH SWITCH	4628995810	1	
19	VOLUME P.C.B	4002519930	1	
20	SWITCH P.C.B	4002519910	1	
21	SELECTOR SWITCH	4618000410	1	FOR KS
22	XLR CONNECTOR	4358999510	1	
23	XLR CONNECTOR	4358999610	1	
24	FUSE HOLDER	4458000220	2	FOR KS
24-1	FUSE HOLDER	4458000210	2	FOR UL,CSA G-EUROPE, BSI
25	BEZEL PUSH	8523999610	1	
26	SLIDE KNOB	8543002912	31	
27	PUSH KNOB	8545998710	1	
28	VOLUME KNOB	8545010210	4	
29	PUSH KNOB	8545998510	2	

[illegible]

Exploded View of Cabinet & Chassis



Schematic Diagram



Block Diagram

